## **ABSTRACT**

Some embodiments of the invention provide a method of pre-computing routes for nets a region of a design layout. These routes are used by a router that uses a set of partitioning lines to partition the region into a plurality of sub-regions. For each particular set of potential sub-regions, the method initially identifies a set of routes that traverse the particular set of potential sub-regions. For each particular route identified for each particular set of sub-regions, the method then determines whether the particular route is stored in a storage structure. If not, the method stores the particular route in the storage structure.